



2013

Annual Report to the DMMP Executive Committee

Implementation of the Dredged Material Management Act of 2001

Activities and Recommendations

PREPARED BY THE DMMP MANAGEMENT COMMITTEE

Approved by the Management Committee November 13, 2013

Executive Summary

The State of Maryland's Dredged Material Management Program (DMMP) is a rolling twenty-year plan to address the State's needs to dredge channels for vessels transiting the Port of Baltimore and find appropriate locations to place the material dredged from the channels. Because of the overall duration of the DMMP, the complexity of the program, and need for coordination, changes generally occur gradually over time, and the program is adjusted as necessary. This Annual Report presents an overview of the accomplishments of Maryland's Dredged Material Management Program (DMMP) during 2013. It is respectfully submitted to the DMMP Executive Committee by the DMMP Management Committee to summarize progress, as well as to identify significant issues to be addressed in 2014.

Management and Funding: Providing sufficient placement capacity and funding for all dredging needs is a continuing challenge. The Maryland Port Administration (MPA) is working closely with the U.S. Army Corps of Engineers (Corps) Baltimore District office as that District updates its twenty year Dredged Material Management Plan. This plan will act as a roadmap for timely and quality project delivery for the Port of Baltimore for the next 20 years. The Corps is scheduled to publish a draft of the updated Dredged Material Management Plan by February 2014. A final report is due by February 2015. Progress in developing placement capacity at three critical sites, Poplar Island, Pearce Creek and Coke Point, has been limited during 2013 for various reasons which are described in the Report Narrative below.

Innovative Reuse: MPA continued to evaluate Innovative Reuse projects proposed by Schnabel Engineering (various dredged material and steel slag blends for use as borrow material for road embankment construction) and HarborRock (conversion of dredged material to lightweight aggregate for use in construction components such as bridge decks or blocks). As a result of this evaluation, MPA has decided that the Schnabel Engineering project would not move forward due to issues with leaching of metals from the dredged material – steel slag blends and the costs and challenges of controlling the leachate. MPA is working with MDOT to assess the feasibility of a Public Private Partnership for conversion of dredged material to lightweight aggregate. MPA is also considering options for a long-term innovative reuse strategy that would assist with implementation of projects, and remove barriers to implementation, such as existing regulations. Public support for innovative reuse remains high.

Stakeholder Engagement: Communications and public outreach continue to be critical components of the overall DMMP success story. Efforts in 2013 focused on Masonville and Pearce Creek. MPA has continued to strengthen the overall outreach program to provide the public with a deeper understanding of the issues as well as welcome its contributions to the continued generation of new ideas.

Baltimore Harbor Sites: The Cox Creek and Masonville Dredged Material Containment Facilities (DMCFs) remain the only options currently available for placement of harbor dredged material. The relatively small combined capacity of these two sites has required MPA to manage site utilization carefully. MPA continues to prioritize its approval of private sector dredging projects seeking to use Port placement capacity, accepting only those involving cargo related maintenance dredging. MPA continues to actively pursue the Coke Point site; however, progress

on this site has stalled due to property negotiations. MPA has begun studies of expanding the Cox Creek Dredged Material Containment Facility (DMCF) to include consideration of possibly acquiring the Cristal USA site (formerly Millennium Inorganic Chemicals). Data collection is underway to support a possible pilot test of Confined Aquatic Disposal (CAD).

Chesapeake Bay Channels and Placement Sites: Poplar Island remains the primary placement option for sediments dredged from Bay channels located in Maryland waters south of Pooles Island. A Limited Reevaluation Report (LRR) for Poplar Island and the Expansion project that modifies the existing authorization to reflect the new higher cost estimate is under review by the Assistant Secretary of the Army for Civil Works which will be followed by Office of Management and Budget review. Completion of the review will allow the cost adjustments to be considered by Congress for authorization and subsequent construction appropriations. Placement needs beyond those met by Poplar Island Expansion would be addressed by longer-range plans for James Island and Barren Island in the Mid-Chesapeake Bay (Mid-Bay Islands).

If the U.S. Congress passes a Water Resources Development Act (WRDA) in 2013, it may include provisions to allow the modified costs for Poplar Island and its Expansion, cost sharing for Poplar Island which is more favorable to the State of Maryland, as well as increased access to the Harbor Maintenance Trust Fund. It may also include authorization of the Mid-Bay Islands project. If a WRDA is not passed in 2013, seeking congressional authorization for both projects will remain a priority.

Upland Sites - Chesapeake and Delaware Canal: Several scenarios are under consideration for dredged material placement from the approach channels to the C&D Canal. The most cost-effective long-term option is the reopening of the Pearce Creek site, located at the mouth of the Elk River. However, this site has groundwater concerns, and some interim capacity at alternate sites will likely be needed until those concerns are resolved, including acquisition of any necessary funds to resolve the issues.

The Corps' Philadelphia District has initiated steps to use Courthouse Point as an interim DMCF. Due to concerns about potential groundwater issues there, and in response to a request from the Maryland Department of the Environment (MDE), the Philadelphia District has drilled and sampled wells in the vicinity to support its application for water quality certification. Once results are available, the Philadelphia District will review the information with MDE.

If adequate interim capacity and the long-term Pearce Creek option are not available, the undesirable contingency plan is to transport material to Poplar Island. Extra transportation costs associated with placing these sediments in Poplar Island are estimated at \$9 million to \$14 million annually, perhaps more than doubling the Philadelphia District's annual maintenance costs.

Contingency Plans: The primary contingency plan for disposal of Bay sediments is to utilize an existing ocean placement site. U.S. Environmental Protection Agency (EPA) and Corps approval, as well as sediment monitoring, was achieved in prior years. This approval is contingent upon the sediments continuing to meet federal guidelines as determined by triennial

testing. To meet this requirement, MPA took sediment samples in late 2012 and expects to have discussions with EPA regarding the testing results in late 2013.

Projected Future New Work Dredging: Several significant projects will require new work (i.e., not maintenance) dredging in the future. These include completion of the 50-foot channel to its Congressionally authorized widths, enhancements to Seagirt Marine Terminal Berth 4 access channels, and dredging for potential future marine terminals developed on or near a DMCF site in Baltimore Harbor.

Farewell and Best Wishes to a Valued Colleague

A very significant change is occurring to the DMMP with the retirement of Frank L. Hamons on November 1, 2013. Mr. Hamons served as the leader and primary spokesperson of the DMMP, while also leading the MPA's Harbor Development Department. He played pivotal roles in the success of the Masonville Dredged Material Containment Facility and Community Enhancement Project, the Poplar Island Environmental Restoration Project, Hart-Miller Island, and the 50-foot Channel Deepening Redesign. He served as the Chair of the American Association of Port Authorities (AAPA) Harbors and Navigation Committee three times during his career, as well as Chair of the Quality Partnership Initiative, a partnership among AAPA, its member ports, and the U.S. Army Corps of Engineers that was created to improve the working relationship between ports and the Corps in order to improve joint project delivery. During its Annual Convention in October 2013, AAPA honored Mr. Hamons with its rarely presented, "IMPORTANT PERSON" recognition. His success over the years has been due, in part, to his ability to reconcile harbor and navigation needs with environmental and community interests to produce cost effective, expedited project results. The Management Committee offers its congratulations and best wishes to Mr. Hamons for his many contributions to the DMMP and his numerous other accomplishments during 47 years of distinguished State service.

Recommendations for 2014

- Continue to work with the Maryland Congressional delegation to support sufficient funding and beneficial policies for the Corps' dredging program serving the Port of Baltimore.
- Work closely with the Corps' Baltimore and Philadelphia Districts in the update of their Dredged Material Management Plan to ensure a full understanding by the Corps of the Port of Baltimore's expected business growth and development and DMMP plans, so that the plans and schedules are fully coordinated.
- Promote state dredging and dredged material placement priorities for inclusion in the next WRDA or in other appropriate federal legislation, including modification of the authorization for Poplar Island and its expansion and authorization of the Mid-Chesapeake Bay Island Ecosystem Restoration Project.
- Pursue the requirements necessary to bring Coke Point on line as a DMCF.
- Continue the process of reviewing and evaluating the 2011 Harbor Team recommendations (See Appendix 5) concerning other future placement options, including other sites, options for Innovative Reuse, and CAD.
- Continue to pursue Innovative Reuse project opportunities, including cost effectiveness analysis, to ensure compatibility with the overall DMMP.
- Continue to support the Corps' Philadelphia District as it works with stakeholders and MDE to pursue dredged material placement capacity at previously used C&D Canal upland sites for placement of material dredged from the C&D Canal approach channels in order to minimize costs and impacts to other placement sites.
- Continue the enhanced coordination efforts with the Corps at the District, Region and Headquarters levels, the Assistant Secretary of the Army for Civil Works, and the Office of Management and Budget on dredging and dredged material management needs and planning to meet the current and future needs of the Port of Baltimore.
- Continue to increase the public's knowledge, understanding, and support of Maryland's DMMP through strategic outreach to the communities, businesses and schools in the vicinity of our project sites.
- Continue to work with the Hart Miller Island Citizen's Oversight Committee and DNR to complete a closure plan for HMI and to start implementing the plan.

2013 Annual Report Narrative

Approximately 4.34 million cubic yards (mcy) of material must be dredged annually to maintain federal channels and anchorages at their authorized depths and widths to ensure reliable navigational channels for vessels transiting the Port of Baltimore. MPA and private sector partners dredge another 0.8 mcy annually for maintenance, new work, and expansion projects, and federal new work projects are estimated at 0.1 mcy of material per year. Altogether, MPA, private sector, and federal maintenance, new work, and expansion dredging needs are estimated at 5.24 mcy per year, a total of about 105 mcy over a 20-year planning period. All dredged material must be placed in approved placement sites or beneficially used.

Larger vessels are entering the Port of Baltimore, and it is expected that an increased number of larger ships will call following the anticipated 2015 completion of the Panama Canal expansion. The achievement of the 50-foot deep berth and installation of the next generation of cranes at Seagirt Marine Terminal by Ports America Chesapeake positions the Port of Baltimore to attract the potential cargo growth associated with the Panama Canal expansion. As one of only two U.S. East Coast ports that currently have a 50-foot deep navigation channel, it is critical that the Port of Baltimore have sufficient dredged material placement capacity to support maintenance of its 50-foot channel in terms of both depth and width in order to capitalize on that expected growth.

I. KEY ISSUES

This report of the Management Committee provides updated information on all activities for the 2013 Dredged Material Management Program (DMMP). In reviewing the year's work, it is clear that certain major issues are critical to the success of the DMMP and should be brought to the attention of the Executive Committee for the purpose of planning the year ahead. This section highlights these significant issues.

A. Capacity

The options for the placement of material dredged from both harbor and Chesapeake Bay channels continues to be a major challenge to the Maryland DMMP. Maritime dredging needs are driven by the Port's public and private sectors and local governments throughout the entire harbor and Bay channel system. With the closing of the Hart-Miller Island and Pooles Island placement sites, the successful development of additional dredged material placement capacity is on a critical timeline. Consideration is now being given to completing the widening of the existing harbor and Bay 50-foot channels, creating even more urgency that dredged material placement sites are fully operational on the projected sequential schedule. Innovative reuse options to provide a minimum reuse of 0.5 mcy annually are still in the planning stage, and at this time are estimated to provide only a portion of the capacity needed for harbor material. The overall strategy for 20-year capacity is charted in Appendix 4 for annual approval by the Executive Committee so that options can be developed and made operational as needed.

***Challenge:** Although the DMMP identifies projects with capacity for 20 years out, some projects face permitting or other risks to implementation.*

B. Funding

Budget cuts, federal law, policy, and technical issues continue to affect the availability of state and federal funds for maintenance and new work dredging as well as existing and future placement capacity. One or more of these issues affects every activity of the DMMP.

Passage of a new federal Water Resources Development Act (WRDA) is urgently needed to authorize federal participation in important DMMP projects. The Senate passed a WRDA bill in May 2013. The House is still considering its version of the bill as of the 4th week of October 2013. As of this writing, there are differences between the Senate bill and the proposed House bill that need to be resolved. Key issues of concern to MPA are (1) modification of Poplar Island and Poplar Island Expansion authorizations to increase project costs, (2) changing cost sharing for Poplar Island Expansion from the current 65% federal/35% non-federal cost share to the originally planned 75% federal/25% non-federal cost share; and (3) authorization of the Mid-Bay project. Depending on the final bill, access to the Harbor Maintenance Trust Fund may increase over time. MPA and the Maryland Department of Transportation (MDOT) are coordinating closely with the Maryland Congressional Delegation on WRDA efforts by providing comments and information to both Senate and House members. The Citizens Advisory Committee sent a letter to the Maryland Congressional Delegation supporting the passage of a WRDA bill and expressing a sense of urgency regarding the availability of funds to ensure that the Port of Baltimore maintains its competitive advantage.

Federal appropriations reductions may have large impacts on maintaining channel infrastructure, and significant projected increases in costs could delay development of future placement options including the Poplar Island Expansion, Mid-Bay Islands, Pearce Creek and Coke Point projects. There are also significant cost implications for Innovative Reuse.

Constrained budgets are resulting in fewer funds for important dredging projects, studies and construction of environmental improvements, and containment projects across the nation. Due to the unavailability of federal funds, some ports are using state funds for projects that would otherwise be federally funded. The Port of Miami is currently using state funds for planning studies and the Port of Jacksonville is using state funds for construction projects. The U.S. Army Corps of Engineers (Corps) began addressing these constrained budgets through several initiatives including a new “top-down” approach to budgeting that would require the demonstration of performance measures as a means of accomplishing the national priorities, goals and objectives. In addition, the Corps directed a nationwide “reset” and reclassification of feasibility studies aimed at reducing the number of inactive studies. The Corps is implementing a strategy for the Civil Works Planning programs that includes directives to focus funding on high priority activities. In addition, the Corps is developing new procedures to comply with the recently issued Council on Environmental Quality (CEQ) “Principles and Requirements for Federal Investments in Water Resources” (P&R) intended to guide federal agency investments in water resource related projects.

As the Corps moves forward to develop and implement these new policies and procedures, the Port of Baltimore, along with other US ports, has expressed a willingness to work with federal agencies on streamlining, interagency reviews, cost benefit analysis and other strategies outlined in the new procedures and the CEQ guidelines. However, it should be acknowledged that the MPA has expressed concerns about some of the methods that may be employed in the Corps' proposals for performance based decision making regarding funding of dredging projects. The Port of Baltimore and its partners are committed to working cooperatively with the Corps on all policies and procedures to insure the continued availability of safe and reliable navigation channels.

Challenge: *Maryland may need to provide additional funds to support new dredging projects and possibly even maintenance work in the near future. The Port of Baltimore must continue its enhanced advocacy for reasonable and fair consideration in the application of the new project budgeting strategies.*

II. PROGRAM MANAGEMENT

The State of Maryland DMMP was created in recognition of the importance of the long range planning and collaboration necessary to keep the dredging program on course. A committee hierarchy (see Appendix 1) was developed to ensure the success of this complex cooperation. Committee members represent various federal and state agencies, environmental groups and citizen groups. The broad based committee structure works cooperatively to study, evaluate, and proactively plan to ensure that dredging needs and dredged material management options for today and the future will be met. This report is provided annually by the Management Committee to inform the Executive Committee of the year's accomplishments as well as to suggest future challenges for the DMMP in the coming year. Memberships of the Management Committee and the Executive Committee are shown in Appendices 2 and 3, respectively.

Maryland's DMMP and the Corps' Dredged Material Management Plan co-exist and are mutually supportive. Collaborative efforts have greatly helped in the management of both plans. During 2013, the Corps continued updating its Dredged Material Management Plan. The Corps is scheduled to publish the final updated Dredged Material Management Plan by April 2015. It will be essential to maintain strong links for communication and information sharing between the State and the Corps through the federal revision and updating process so that projections for dredging needs and dredged material placement capacity can be accurately tied to forecasted business growth and customer needs. Such cooperation can result in mutual efficiencies and success.

The Management Committee believes that the structure and operation of the state DMMP as a collaborative and transparent process with the Port's stakeholders has been successful and should be maintained and enhanced as necessary in 2014 and beyond.

***Challenge:** The State and the Corps must work cooperatively in their DMMP activities as well as in the development of the Corps' Dredged Material Management Plan update to assure timely information sharing, resolution of issues, and identification of mutually beneficial outcomes.*

III. INNOVATIVE REUSE

The Harbor Team reaffirmed its strong support for Innovative Reuse as part of the MPA's long-range management plans for harbor sediments, with a goal of reusing at least 0.5 mcy of dredged material per year by 2023, and suggested consideration of accelerating this goal, if possible.

MPA entered into negotiations with HarborRock for a contract to convert dredged material into lightweight aggregate at a plant to be located at MPA's Cox Creek property, however several issues remained unresolved. As a result, MPA and MDOT are considering the feasibility of starting a Public Private Partnership (P3) process for lightweight aggregate.

The project undertaken by Schnabel Engineering to create a construction grade fill material by combining dredged material and steel slag entered a new phase as issues related to possible leaching from the material were worked on intensively with the Maryland Department of the Environment (MDE), the State Highway Administration (SHA), the Maryland Environmental Service (MES) and MPA. As a result of these discussions, MPA concluded that the Schnabel Engineering project would not move forward due to issues with leaching of metals from the dredged material – steel slag blends and the costs and challenges of controlling the leachate.

In addition, MPA is beginning a process of rethinking the Innovative Reuse strategy to ensure that options are available for innovative reuse. Cost continues to be a major consideration for MPA.

The Innovative Reuse Committee has been kept informed of activity but did not meet in 2013. The intent is to reconvene the committee to get its advice on alternative approaches to reusing dredged material.

The potential for developing a recycled product from dredged material as a significant component of the future dredged material management strategy continues to be raised in public forums and supported by many stakeholders.

***Challenge:** Ensuring that a state investment in innovative reuse technology results in a cost effective means of easing the placement capacity shortfall in the harbor continues to be a desirable goal.*

IV. STAKEHOLDER ENGAGEMENT

A. Community Outreach

The MPA continues to increase its visibility and the public's knowledge of the Port of Baltimore, its operations and projects, and their importance to the State of Maryland. MPA works

continuously to improve collaboration, inclusiveness, and transparency with its partners, as well as to increase outreach, Port education, communications, and visibility of its programs. Through the DMMP, over 10,000 people had the opportunity to learn about the Port of Baltimore in 2013 by visiting DMCFs and participating in off-site events, such as community fairs, meetings, conferences, and classroom presentations.

The MPA continued an awareness and relationship building effort with Northern Anne Arundel County community organizations. This effort was highly successful for the MPA in expanding awareness about Port activities and developing closer ties with community leaders in Northern Anne Arundel County. On May 4, 2013, MPA hosted a community open house event at the Cox Creek DMCF that included a riding tour of the entire facility, an early morning bird walk, and hands-on activities on the shore of the adjacent Swan Creek.

MPA's commitment to community, education, and the environment is demonstrated at the Masonville site where community members can visit the Masonville Cove campus and participate in programs hosted by Living Classroom Foundation and the National Aquarium which focus on Masonville Cove restoration, the Bay Watershed, and the Port of Baltimore. In recognition of the tremendous urban asset that Masonville Cove has become, the site was designated by the Department of Interior as the nation's first Urban Wildlife Refuge Partnership on September 26, 2013. Local, state and federal elected officials were joined by the MDOT Secretary, environmental and community leaders and others to celebrate this significant accomplishment. The first open house event at Masonville Cove was held October 19, 2013 in conjunction with PortFest, where members of the public could learn more about the project, the Chesapeake Bay, and the Port. Community members participated in an early morning bird walk, tours of the DMCF, Cove and a pilot launch, and hands-on environmental activities.

Tours at Maryland's dredged material placement sites continue to grow and have proved to be excellent teaching tools for both school students and adults. To help their students meet new environmental literacy graduation requirements, local teachers brought them on field trips to Cox Creek, Hart-Miller Island, Masonville, and Poplar Island. Through hands-on field activities, teachers and students discovered how the MPA is playing a crucial role in habitat restoration.

Additionally, local educators received a firsthand look at the importance and scope of the Port of Baltimore through a week-long externship over the summer organized by the Baltimore Port Alliance Education and Outreach Committee. Twelve teachers spent time with 23 maritime agencies, learning about the vast Port infrastructure and the coordination needed to deliver cargo from one destination to another.

Challenge: Long-term financial and management sustainability of the Masonville Cove Environmental Education Center campus is a continuing challenge. There is a need to explore partnership opportunities with other state and Federal agencies that can help support campus management and operations. Additionally, the Masonville education stakeholders are working to develop a diverse funding portfolio.

B. MPA and Corps Collaboration

Given the continued significant challenges facing the state DMMP and federal Dredged Material Management Plan, the Management Committee again encourages regular executive level strategy meetings between MPA and the Corps.

Shortfalls in Corps dredging budgets are affecting channel reliability at a time when larger and wider vessels with drafts near 50 feet are calling on the Port of Baltimore more frequently. Full availability of authorized channel depths and widths is critical to safe navigation. The larger the vessel, the less margin there is for error. Groundings could have significant adverse effects on the business of the Port, the ecology of the Bay and those who use it. This situation requires close coordination and collaboration among MPA, the Corps, and the Association of Maryland Pilots to minimize impacts on navigation. Through 2013, the MPA has continued to employ a coordinated and enhanced outreach strategy to all levels of the Corps, the Assistant Secretary of the Army for Civil Works, and the Office of Management and Budget to include developing relationships with all levels of decision makers within the Corps and agencies responsible for federal budget recommendations. MPA also hosted a tour of the Port of Baltimore for the Chief of Engineers and Commander of the U.S. Army Corps of Engineers, Lieutenant General Thomas P. Bostick, on August 13, 2013. Working through the American Association of Port Authorities (AAPA), MPA continues to be heavily engaged with the Corps as it develops its budget transformation strategy, a national initiative intended to adjust navigational needs to available dollars. These lines of communication are important to establishing a greater understanding of the Port of Baltimore's business plans, local and regional economic impacts, and expectations for growth that drive the needs of the DMMP.

***Challenge:** With even more constraints on federal funds and new federal agency procedures and policies, coordination among MPA, the Corps, Port customers, stakeholders and the Pilots must be further strengthened. In addition, the MPA must continue to enhance communications with all levels of decision makers within the Corps at the District, Division and Headquarters levels and the agencies responsible for federal budget recommendations.*

V. HARBOR PROJECTS

A. Hart-Miller Island

The Hart-Miller Island (HMI) DMCF was closed to dredged material inflow on December 31, 2009. The South Cell is maintained as wildlife habitat and includes a managed pond that can be drawn down to create mud flats to attract migrating shorebirds. De-watering efforts in the North Cell are ongoing and there are plans to create wildlife habitat after water quality is stabilized. Water quality stabilization is necessary because the water in the DMCF is currently too acidic to discharge and soil pH is too acidic to grow or sustain desirable wildlife habitat. Technical options to stabilize water quality and create habitat were developed and discussed in 2013, and it is anticipated that MPA will settle on a plan to move forward in 2014. Members of the HMI Citizen's Oversight Committee have expressed concerns about the need for dedicated funding to implement the closure plan and for funding the long term maintenance and operation of the island.

Once construction of the closure plan is complete, it is anticipated that the Maryland Department of Natural Resources (DNR) will assume overall management responsibilities and this area will be opened for passive recreation to the public. Partnerships are actively being sought with state, local, and federal agencies regarding participation in some of the management responsibilities.

***Challenge:** Options for implementation plans and budget concerns are being evaluated to assess the ability of state agencies to create desirable habitat and manage Hart-Miller Island after the closure plan is completed.*

B. Cox Creek

In the fall of 2013 approximately 450,000 cy of dredged material from the Brewerton Angle channel was placed in the Cox Creek DMCF. A nutrient monitoring plan has been established to document and estimate the potential pollutant loads that are expected to be released into the Harbor in the future. In March 2012, MPA initiated a formal request to modify the Cox Creek and Masonville state discharge permits and create an Overlay Permit that allowed for the sharing of current and future nutrient waste load allocations for Cox Creek, Masonville and future MPA facilities. MPA received draft permits on July 11, 2013 and returned comments to MDE on August 22, 2013. Proposed revisions to the draft permits were received from MDE in late October 2013, and discussions with MDE continue. As of this time, Cox Creek remains the primary site location of a potential Innovative Reuse processing facility.

C. Masonville

Dredged material inflow to Masonville in 2013 was about 48,000 cy, all from the private sector.

Remediation and habitat restoration continued in Masonville Cove, with the majority of work being completed in the approximately 24 acres of Access Zone 2. Work included clearing invasive vegetation, hauling, and capping (reusing stockpiled soil from Dundalk Marine Terminal). The large nontidal wetland in Access Zone 2 was planted with herbaceous vegetation, shrubs, and trees. Fine-tuning of plantings in Access Zone 1 continued, with replacement of dead trees as well as shrub and grass plantings at the living shoreline. Fine-tuning of the plantings in the fringe wetland also occurred.

The continued improvement of substrate in Masonville Cove will resume by the end of 2013.

MPA coordinated with the Maryland Department of Natural Resources (DNR) in 2013 to further develop the eel passage mitigation project at Daniels Dam. A passage is expected to be constructed by the end of the year, with DNR manually moving eels upstream in the meantime. Another mitigation project in partnership with DNR, shad and herring stocking, completed its first year in 2013. Preliminary results are being considered successful for the four species stocked.

MPA continued coordination with Baltimore City regarding the Biddison Run stream restoration, but City funding constraints have delayed progress on the project.

MPA also continued coordination with various partners to develop the five trash interceptor mitigation projects. The Masonville Cove trash interceptor is in final stages of design.

Construction of the Jones Falls waterwheel by Waterfront Partnership of Baltimore, with partial funding by MPA, began in September and is expected to be complete by March 2014. The remaining three trash interceptors (Carroll Park, Dundalk Marine Terminal, and Westport) are in various stages of design.

MPA has partnered with the U.S. Fish and Wildlife Service (USFWS) to provide a comprehensive visitor experience at Masonville Cove. USFWS designated Masonville as the nation's first Urban Wildlife Refuge Partnership, which supports its Urban Wildlife Refuge program.

As noted in Section V.B. above, the Cox Creek and Masonville discharge permits are linked regarding the allowed pollutant loads released into the Harbor. See Section V.B. for details.

D. Coke Point

The Harbor Team recommended Coke Point as a third potential DMCF in 2003 and reaffirmed this recommendation in 2011. MPA completed a Draft Feasibility Study Report for the site in 2012. Permitting and environmental impact documents for this option are delayed until property acquisition is resolved. Annual dredged material placement capacity for this site is expected to be about 1.0 mcy.

Property acquisition and environmental remediation are the primary challenges associated with this land parcel of approximately 317 acres. Site ownership has changed on numerous occasions over the past ten years; the current owner of the land is Environmental Liability Transfer, Inc. (ELT)/Sparrows Point LLC (SPLLC). ELT is an environmental liability acquisition company and SPLLC is a subsidiary formed for the purpose of developing the site. MPA first expressed its interest in the Coke Point Peninsula of Sparrows Point to the new owners in 2012. In 2013 there were offers and counteroffers between MPA and the property owners, but no agreement has been reached.

In mid-2013, MPA determined that approximately 245 additional acres over and above that considered for the DMCF and terminal on the west side of Coke Point would be needed to sustain its mission of stimulating waterborne commerce through the State of Maryland in a manner that provides economic benefit to the citizens of the State. MPA is in the process of acquiring surveys and appraisals on the new property footprint, including not only the DMCF parcel but also a parcel for a roll on/roll off terminal. The next step would be an offer from MPA for the property, followed by negotiations.

***Challenge:** Timely conclusion of property acquisition, successful permitting, and sufficient funds will be needed in order to accomplish necessary remediation and construct a DMCF at this site.*

E. Cox Creek Expanded and Confined Aquatic Disposal

Two other options were recommended for further consideration by the Harbor Team in 2011: a combined Cox Creek-Millennium placement option as a backup to Coke Point, and a pilot test of

a process known as Confined Aquatic Disposal (CAD).¹ In 2013, MPA completed a reconnaissance study of the combined Cox Creek/Cristal USA, Inc. site (formerly known as Millennium Inorganic Chemicals) and began a study of expanding Cox Creek, to include possible acquisition of the Cristal USA property. MPA is exploring a possible pilot CAD project at Masonville, with input from the Maryland Geological Survey, MDE, Anne Arundel County Department of Public Works and the Chesapeake Bay Foundation (CBF). Anne Arundel County has requested additional information regarding groundwater flow and MPA is preparing to collect that data. Next steps will include additional coordination with Anne Arundel County and other stakeholders.

VI. BAY CHANNELS AND PLACEMENT SITES

A. Paul S. Sarbanes Ecosystem Restoration at Poplar Island and Poplar Island Expansion

The Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island, generally known as Poplar Island, continues to be a national showcase for the beneficial use of dredged material. Significant positive environmental benefits have already been identified though the project is still far from complete. Nesting sea and shorebirds, predatory birds, terrapins, and fish can be found at the site. Habitat restoration continues with grading in the undeveloped wetland areas; the next planting events are scheduled for spring 2014 and 2015. Monitoring projects also continue. The Corps' inflow at Poplar Island in the 2012/2013 dredging season was completed in January 2013 with an estimated 2.5 mcy placed. An additional 0.7 mcy from the C&D Canal approach channels was placed at Poplar Island during the 2012/2013 dredging season.

Due to increased costs at the Poplar Island project, the Baltimore District completed a Limited Reevaluation Report to review costs for Poplar Island and the already authorized Expansion in order to support modification to the Congressional authorization. This report was approved by Corps Headquarters and was forwarded to the Assistant Secretary of the Army for Civil Works on July 22, 2013. It is anticipated that this report will be considered by Congress in 2013/2014. Modification to the authorization could be included in the next WRDA legislation or in some other legislative vehicle, such as an appropriation bill.

***Challenge:** Upwardly revised cost estimates for Poplar Island and its Expansion since the initial figures used for obtaining approval have increased the costs to both the state and the federal government to construct the project. These cost increases will require a modification to the authorization for the projects in a federal WRDA.*

B. Mid-Chesapeake Bay Island Ecosystem Restoration Project - James Island and Barren Island (Mid-Bay)

¹ Confined Aquatic Disposal (CAD) is defined as excavation of cells beneath existing navigation channels or anchorages by dredging in areas where there is commercial-grade sand and gravel underneath the channels or anchorages. These cells would be backfilled with material from maintenance dredging. In most cases, overburden material would have to be removed to access the sand and gravel. This overburden material would be placed in a dredged material containment facility. The commercial-grade sand and gravel would be used in upland construction projects or possibly in beneficial use projects such as capping contaminated areas elsewhere in the harbor.

One of the strategies for providing capacity needed for Bay channel dredged material after Poplar Island and its Expansion have been fully utilized is implementing other island protection and restoration south of Poplar Island, in the Mid-Chesapeake Bay. The Corps and state have developed and approved a plan for Barren Island and James Island. The Mid-Bay project has the strong support of the Dorchester County government and local citizens. As part of the Corps' Dredged Material Management Plan, the timing of the need for the Mid-Bay project may be reconsidered. This will continue to be a significant point of discussion during 2014.

***Challenge:** This project will need to be authorized by Congress in a WRDA in the very near future to address long term dredging needs of the Port. MPA continues to work with Maryland's Congressional Delegation to support project authorization. The MPA will work closely with the Corps in the development of its Dredged Material Management Plan update in an effort to insure that the Mid-Bay project is available in a timely fashion to meet dredged material placement needs.*

C. Upland Sites - Chesapeake and Delaware Canal

The C&D Canal is important to the Port of Baltimore as it provides the shortest route to the Atlantic Ocean and is particularly favored by many auto-carrier ships making the journey between Baltimore and New York/New Jersey and New England ports.

Planning has been underway since 2009 to identify a placement site to replace the Pooles Island open-water site that closed in 2010. The Corps' Philadelphia District is responsible for maintenance of the upper Bay approach channels to the C&D Canal and the C&D Canal proper and owns the DMCFs along the Canal approach and the Canal itself. The Philadelphia District has historically used the Courthouse Point and Pearce Creek DMCFs for placement of approach channel material. The Philadelphia District also utilizes a number of local DMCFs along the Canal (including Bethel and Chesapeake City) for material dredged from the Canal proper.

MPA has been working with the Philadelphia District to reopen Courthouse Point and Pearce Creek in Cecil County. Both have additional capacity that was not needed when Pooles Island was available for open water placement. Both sites now require water quality certificates from MDE to enable the Corps to use them for dredged material placement.

In January 2013, a study commissioned by the Corps and performed by the US Geological Survey was released. This study looked at potential connections between the Pearce Creek site and groundwater. The study found that the site has contributed to groundwater degradation because the confining layer in the Magothy aquifer, under the DMCF, has a hole which has allowed the migration of total dissolved solids (TDS) from the DMCF into groundwater. Many of the homeowner wells in the communities surrounding the DMCF draw water from the Magothy aquifer.

The Philadelphia District has developed conceptual designs of a physical barrier that will be needed to prevent any migration of elevated total dissolved solids caused by the historical operation of the Pearce Creek site. To meet community concerns and regulatory agency requirements, the District has submitted a plan to address any existing groundwater issues that have been caused by the lack of a confining layer between the DMCF and the aquifers below it

that are used for drinking water in the adjacent communities. The plan is under review by MDE. After review, MDE will make a decision as to whether a water quality certificate can be issued which would allow the site to be used for dredged material placement.

During 2013, many meetings with citizens from Cecil County were held to find solutions that will protect the drinking water supply while allowing the Pearce Creek site to be used for placement of dredged material. Cecil County officials have been deeply engaged in these conversations, as has MDE. Options have been developed that include providing deeper individual wells for homeowners as well as developing a central water system.

The Corps has also engaged with MDE on the Courthouse Point site. Outreach to the public identified concerns that problems similar to those at the Pearce Creek site also may arise at Courthouse Point. The Philadelphia District and MDE have agreed on a plan to collect and analyze groundwater data upon which a decision of whether to issue a water quality certificate can be made.

The only currently identified alternative to using the Pearce Creek and Courthouse Point sites is to transport the dredged material to Poplar Island, which would result in added expenditures of roughly \$9 to \$14 million annually for additional transportation costs. The capacity at Poplar Island is needed for maintenance of the channels south of the C&D approach channel.

***Challenge:** Resolution of the permit and water issues at both Pearce Creek and Courthouse Point must be a priority for 2014. Federal funds are being sought to address groundwater concerns. However, federal budget reductions could impact the State's ability to access federal funding. As a contingency, the State is considering non-federal funds that might help meet some of the costs that may be required to meet MDE and community concerns.*

D. Lower Bay Sites

Most ocean-going vessels travel to and from the Port of Baltimore through the southern approach commonly referred to as the 50-foot channel, a deep north-south route extending 150 miles from the Port of Baltimore to the Atlantic Ocean at Cape Henry, Virginia. The Lower Bay channels servicing Port-bound vessels include the Cape Henry, Rappahannock and Wolf Trap. Placement capacity is adequate for the next 20 years. The placement sites include the Norfolk Ocean Disposal Site, the Wolf Trap Alternate and the Rappahannock Shoal Deep.

VII. CONTINGENCY PLANNING - OCEAN PLACEMENT

Ocean placement of dredged material at the Norfolk Ocean Disposal Site is an alternative that could be implemented by the Maryland DMMP as a contingency option if other placement options are not available. Ocean placement of dredged material is regulated under Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972, which states that any proposed placement of dredged material into ocean waters must be evaluated through the use of criteria published by the EPA.

The Corps' Baltimore District and the EPA established a schedule for triennial sediment testing to be conducted as a requirement of maintaining authorization for ocean placement. To satisfy this requirement, sampling was conducted in late 2012 and laboratory analyses were conducted in 2013. It is expected that discussions with EPA regarding the testing results will occur in late 2013. MPA will continue the triennial sediment testing required for maintaining the EPA and Corps authorizations necessary to allow the retention of the ocean placement option as a component of the overall DMMP planning efforts.

As noted above, the Baltimore District is currently updating its Dredged Material Management Plan. As the update process moves forward, the Corps will evaluate the use of ocean placement as a contingency plan. If the federal DMMP is modified to include the ocean placement option, a public notice for the ocean placement option environmental assessment would be released in both Maryland and Virginia. The Corps indicates that federal cost sharing would not be available for ocean placement even if it is included as a viable option in the DMMP.

Challenge: *Continue regular testing to ensure that ocean placement continues to be a viable contingency alternative.*

VIII. PROJECTED NEW WORK DREDGING

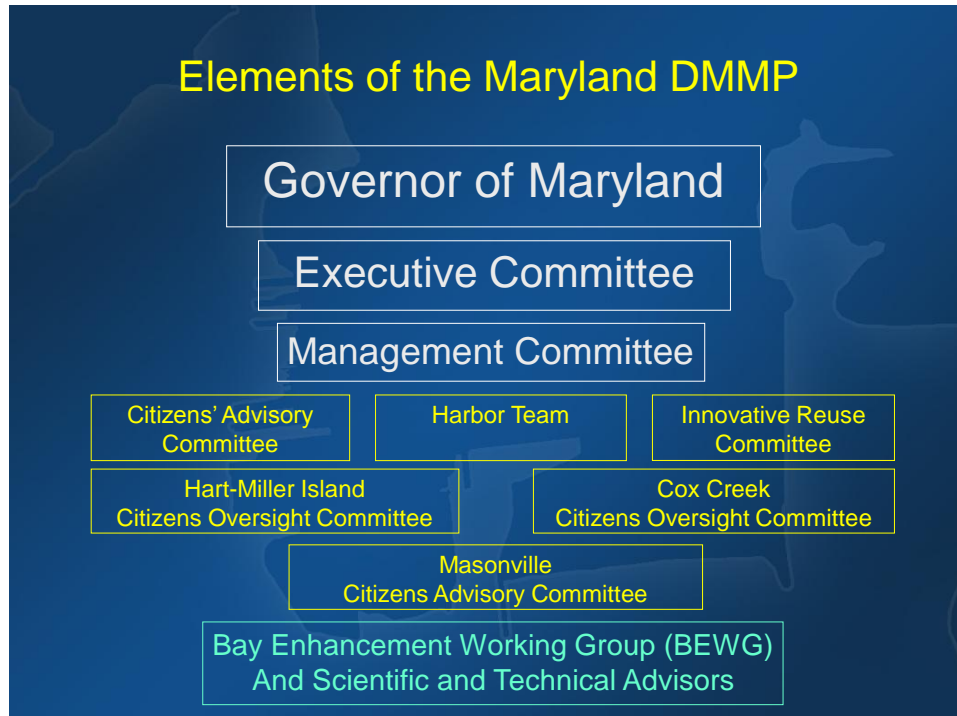
Several significant projects will require new work (i.e., not maintenance) dredging in the future. In February 2012, the MPA requested that the Baltimore District complete the congressionally authorized second phase of the Baltimore 50-foot channel project, i.e., bring all channels in this project from their current width to their authorized maximum widths. Generally, in the lower Bay, channel widths would increase from 800 ft. to 1,000 ft. and in the upper Bay and Harbor, main channel widths would increase from 700 ft. to 800 ft. The Corps has initiated the preliminary steps for the study required to analyze this project. Completion of the project will require dredging of 5.8 mcy in Maryland waters and 7.2 mcy in Virginia waters.

MPA is planning enhancements to improve the use of Seagirt Marine Terminal by widening access in the Seagirt-Dundalk Connecting Channel and the Dundalk West Channel to accommodate turns of larger vessels. To assist with this effort, the MPA applied for and won a \$10 million federal TIGER grant to build more access to rail, expand storage at Fairfield Marine Terminal, and help widen the channel at Seagirt Marine Terminal to accommodate bigger ships. Plans for the project include using material dredged from the Seagirt channel to fill in an outdated wet basin at Fairfield, thereby creating 7.6 acres that can be used for car and heavy equipment storage.

These enhancements, to be undertaken in 2014, would require dredging of 0.8 to 0.9 mcy of material. As cargo continues to grow, MPA will eventually need new marine terminals, which it estimates will require upwards of 9.0 to 10.0 or more mcy of new work dredging.

Challenge: *Sufficient dredged material placement capacity for new work dredging projects will be needed in order to meet the needs of a growing port and economy over the next 20 to 30 years.*

APPENDIX 1: ELEMENTS OF THE MARYLAND DMMP



APPENDIX 2: 2013 MEMBERS OF THE DMMP EXECUTIVE COMMITTEE

Chesapeake Bay Foundation

Alison Prost

Maryland Executive Director

DMMP Citizens' Advisory Committee Liaison

Francis Taylor

North Point Peninsula Council

DMMP Committee Liaison

Donald Boesch

University of Maryland Center for Environmental Science

Maryland Department of Natural Resources

The Honorable Joseph P. Gill (Co-Chairman)

Secretary

Maryland Department of the Environment

The Honorable Robert Summers

Secretary

Maryland Department of Transportation

The Honorable James T. Smith, Jr. (Co-Chairman)

Acting Secretary

U.S. Army Corps of Engineers

Colonel J. Richard (Trey) Jordan, III

District Engineer, Baltimore

U.S. Army Corps of Engineers

Lt. Colonel Chris Becking

District Engineer, Philadelphia

APPENDIX 3: 2013 MEMBERS OF THE DMMP MANAGEMENT COMMITTEE

Association of Maryland Pilots

Captain Eric Neilsen
Captain Joseph Smith (alternate)

Baltimore Port Alliance

Rupert Denney

Chesapeake Bay Foundation

Alison Prost

DMMP Citizens Advisory Committee

Francis Taylor

EPA Region III

Renee Searfoss

**Maryland Department of the
Environment**

Matthew Rowe

Maryland Environmental Service

James Harkins

Maryland Geological Survey

Richard Ortt

Maryland Port Administration

Frank Hamons

**Maryland Department of Natural
Resources**

Bruce Michael

**Maryland Department of Transportation
Policy & Governmental Affairs**

Bruce Gartner

National Marine Fisheries Service

John Nichols

NOAA Chesapeake Bay Office

Peter Bergstrom

Rukert Terminal Corporation

Steve Landess, P.E.

**U. S. Army Corps of Engineers,
Baltimore**

Steve Brown

Justin Callahan (alternate)

**U. S. Army Corps of Engineers,
Philadelphia**

Anthony DePasquale

Tim Kelly (alternate)

U. S. Fish & Wildlife Service

Genevieve LaRouche

Bob Zepp (alternate)

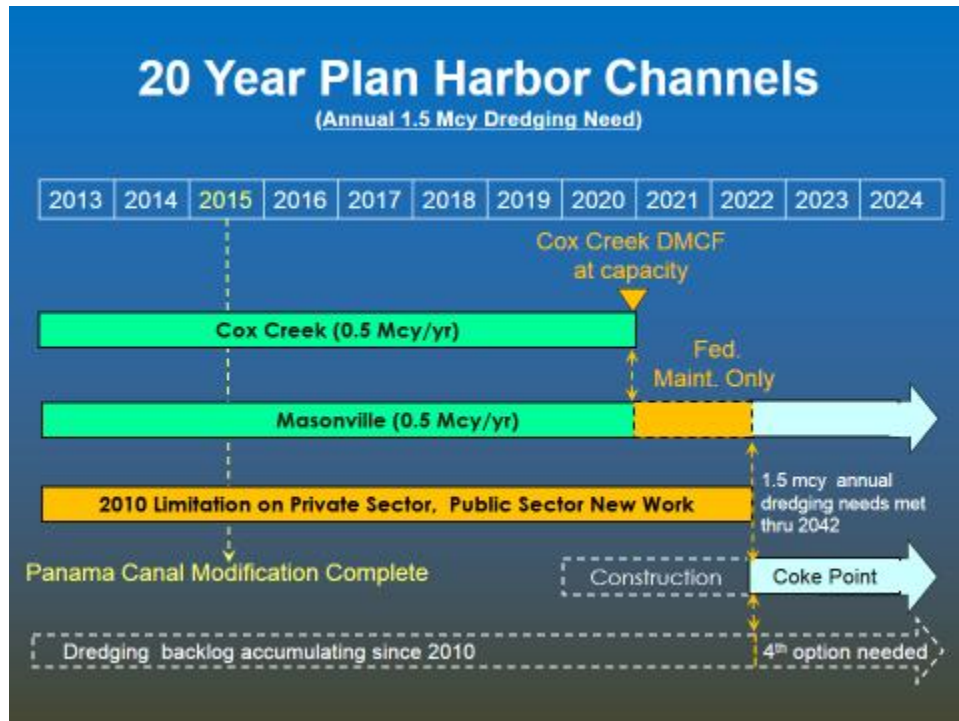
**University of Maryland Center for
Environmental Science**

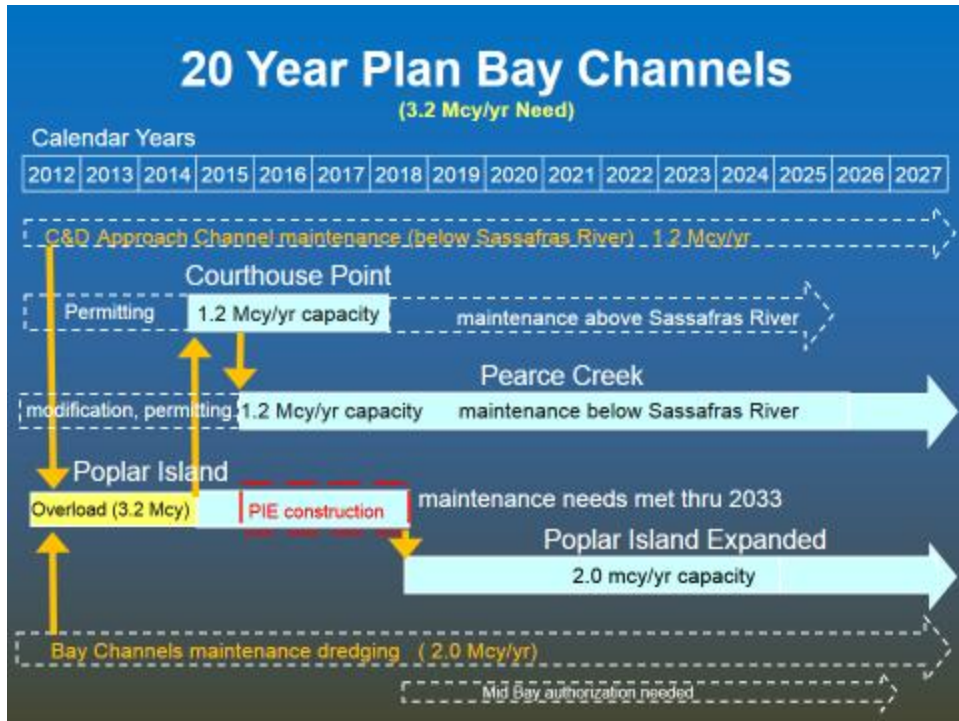
Donald Boesch

(DMMP Management Committee Liaison)

David Nemazie (alternate)

APPENDIX 4: CURRENT 20-YEAR DREDGED MATERIAL PLACEMENT PLAN





**APPENDIX 5: HARBOR TEAM RECOMMENDATIONS FOR FURTHER STUDY:
COKE POINT BACKUP OPTIONS
Report to the Management Committee
and
Executive Committee of Maryland's
Dredged Material Management Program
September 15, 2011
EXECUTIVE SUMMARY**

The Harbor Team considered 23 potential options for backup to Coke Point over a period of one year.

The Harbor Team agreed to the following recommendations:

Strengthening the standards that apply to all dredged material management and community enhancement options;

Convening a committee to investigate and recommend innovative methods of funding community enhancement projects;

Pursuing a placement site with community enhancements at Coke Point as vigorously as possible – with Coke Point remaining the Harbor Team's highest priority;

Conducting a feasibility study to assess innovative reuses already under consideration with a goal of innovatively reusing at least 500,000 cubic yards of dredged material per year by 2023 and answering questions necessary to determine if innovative reuse can become a viable part of the State's Dredged Material Management Program;

Coordinating a plan to conduct a pilot test of Confined Aquatic Disposal (CAD) to determine if MPA could obtain the necessary permits to conduct a pilot test; conducting a pilot test if permits are issued; and, if pilot tests results are favorable, conducting a feasibility study of the use of CAD for harbor materials;

Ranking the Combined Cox Creek Millennium option as the highest priority of the land-based backup options to Coke Point for further study with two provisos:

1. Conducting community outreach to determine whether or not raising the dikes on the existing Cox Creek Dredged Material Containment Facility would be acceptable; if not, this feature would be dropped from further consideration.
2. Holding public information meetings in Anne Arundel County and Baltimore City as close to the zip code of the option as possible.

